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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/890,894	07/10/1997	GERARD CHAUVEL	TIF-15767A	5253
23494	7590	01/26/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			TRAN, DENISE	
			ART UNIT	PAPER NUMBER
			2186	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	08/890,894	CHAUVEL ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Denise Tran	2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 August 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 6-15, 17, 19 and 34-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 36-39 is/are allowed.
- 6) Claim(s) 6-15, 17, 19, 34 and 35 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 November 1999 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. 07/902,191.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. In view of the Remand to the Examiner filed on 8/6/04, PROSECUTION IS HEREBY REOPENED.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Claims 6-15, 17, 19 and 34-39 are pending in the application. Claims 1-5, 16, 18 and 20-33 have been canceled.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because for example, reference characters "ROM 13" and "Program memory 17" and "program ROM memory 33" have been used to designate a program memory; reference characters "processor 6" and "processor 16" have both been used to designate a protocol processor; reference characters "processor 5" and "processor 17" have both been used to designate a main processor; and reference characters "DPRAM 15" and "DPRAM 44" have both been used to designate a common memory. Corrected drawing

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sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The disclosure is objected to because of the following informalities: for example, reference characters "ROM 13" and "Program memory 17" and "program ROM memory 33" have been used to designate a program memory; reference characters "processor 6" and "processor 16" have both been used to designate a protocol processor; reference characters "processor 5" and "processor 17" have both been used to designate a main processor; and reference characters "DPRAM 15" and "DPRAM 44" have both been used to designate a common memory.

Appropriate correction is required.

5. The amendment filed 9/28/1999 and 3/28/02 are objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in particular,

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claim 6, line 4 “a second processor for performing vector processing” and the combination of claim 6, line 4 and claim 35, “wherein said vector processing . . . and matrix computation which requires a more powerful structure than that of DSP and which is generally of the array processor type.” According to fig. 5, and specification, page 5, line 30 to page 6, line 25, the current specification only teaches the DSP 5 and the protocol processor 6 but do not teach the DSP 5 performing vector processing or the combination of the DSP 5 performing vector processing and “wherein said vector processing . . . and matrix computation which requires a more powerful structure than that of DSP and which is generally of the array processor type” claim 35.

Applicant is required to cancel the new matter in the reply to this Office Action.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claim 6, line 4 “a second processor for performing vector processing” and claim 35, “wherein said vector processing . . . and matrix computation which requires a more powerful structure than that of DSP and which is generally of the array processor type” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure

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is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 6-15, 17, 19 and 34-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, claim 6, line 4 "a second processor for performing vector processor" and the combination of claim 6, line 4 and claim 35, "wherein said vector processing . . . and matrix computation which requires a more powerful structure than that of DSP and which is

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generally of the array processor type" were not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. According to fig. 5, and specification, page 5, line 30 to page 6, line 25, the current specification only teaches the DSP 5 and the protocol processor 6 but do not teach the DSP 5 performing vector processing or the combination of the DSP 5 performing vector processing and "wherein said vector processing . . . and matrix computation which requires a more powerful structure than that of DSP and which is generally of the array processor type" claim 35.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 6 and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al., U.S. Patent No. 5,197,130 (hereinafter Chen).

As per claim 6, Chen teaches an apparatus, comprising:

a first processor for performing scalar processing (e.g., figs. 4 and 13, el. 100; col. 11, lines 1-15 or fig. 5, el. 102), said first processor comprising a core (e.g., fig. 4, el. 106, fig. 5, el. 120), a program memory (e.g., figs. 4, 13, el. I cache or fig. 5, el. 110) and a local memory (e.g., fig. Figs. 4, 13, S registers or fig. 5, S registers);

a second processor for performing vector processing, (e.g., figs. 4 and 13, el. 100; col. 11, lines 1-15 or fig. 5, el. 102), said second processor comprising a core (e.g., fig. 4, el. 106, fig. 6, el. 130, 106), a program memory (e.g., figs. 4, 13, el. I cache or fig. 6, el. 132; col. 12 lines 30-40) and a local memory (e.g., figs. 4, 13, V registers or fig. 6, V registers);

a synchronizing circuit for coupling said core of said first processor to said core of said second processor (e.g., col. 17, lines 25-40; col. 23, line 15 to col. 26, line 65);

and a memory circuit for coupling said local memory of said first processor to said local memory of said second processor (e.g., fig.1, el. 12 or 14 or 16).

As per claims 14-15, Chen teaches said memory circuit for coupling said local memory of said first processor to said local memory of said second processor is physically separate from said first and second processors (e.g., fig.1, el. 12 or 14 or 16); and said memory circuit for coupling said local memory of said first processor to said

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local memory of said second processor is a DPRAM (i.e., dual ports RAM; e.g., fig. 23, el. 400).

11. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al., U.S. Patent No. 5,197,130 (hereinafter Chen), as applied to claim 6 above, and further in view of Rusterholz et al., U.S. Patent No. 4,945,479 (hereinafter Rusterholz).

As per claims 11 and 13, Chen does not explicitly show said local memory of said first processor being RAM or said local memory of said second processor being RAM. Rusterholz shows a local memory of a first processor being RAM or a local memory of a second processor being RAM (e.g., col. 26, lines 10-15 or col. 31, lines 5-10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Rusterholz into the system of Chen because it would allow memory locations to be accessed in any order, thereby increasing speed of accessing data.

12. Claims 36-39 are allowable over the prior art of record.

13. Claims 7-10, 12, 17, and 34-35 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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14. Claim 19 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112 first paragraph, set forth in this Office action.

15. Applicant's arguments with respect to claims 6-15,17 and 34-35 have been considered but are moot in view of the new ground(s) of rejection.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Stokes et al. (4101960) show a front end task processor and a parallel task processor;

b) Aoyama et al. (4780811) show vector and scalar processor synchronization; and

c) Fukagawa et al. (5293602) show a system having: scalar processor, vector processor and a shared storage.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (571) 272-4189. The examiner can normally be reached on Monday, Thursday, and Friday from 8:45 a.m. to 5:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim, can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Deureghan*

DT.

1/3/05



MATTHEW KIM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER